



# UNITED STATES PATENT AND TRADEMARK OFFICE

80

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,247	12/15/2000	Krishna Kishore Yellepeddy	AUS9-2000-0947 US1	2751

7590 04/21/2005

Law Office of Joseph R. Burwell  
P.O. Box 28022  
Austin,, TX 78755-8022

EXAMINER

COLIN, CARL G

ART UNIT	PAPER NUMBER
----------	--------------

2136

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/738,247	<b>Applicant(s)</b> YELLEPEDDY ET AL.	
	<b>Examiner</b> Carl Colin	<b>Art Unit</b> 2136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \*   c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

5

## **DETAILED ACTION**

### ***Response to Arguments***

1. In response to communications filed on 1/10/2005, applicant amends claims 1, 13, 24, and 33, and claim 8, which was missing has been added. The following claims 1-50 are presented for examination.
2. In response to communications filed on 1/10/2005, the amendment to the specification has been considered and the objection has been withdrawn. Applicant mentions that a set of formal drawings will be mailed separately from the response, which is being faxed. However, no corrected drawings have been received as yet, therefore the objection to the drawings has not been overcome.
3. Applicant's remarks, pages 18-31, filed on 1/10/2005, with respect to the rejection of claims 1-50 have been fully considered but they are moot in view of the new ground(s) of rejection. The amendments to some of the independent claims replacing the reception software to the request implementation software and the addition of new claim 8 have been considered. Applicant has changed the scope of the invention in view of the amended claims, and a new ground of rejection has been made in view of new references as discussed below.

### ***Drawings***

Art Unit: 2136

4. Figure 3 is objected to as failing to comply with 37 CFR 1.84(p)(5) because it does not include reference numbers (300), (312) and (330) in the description on p. 17, line 18 and 27; page 17, line 25; and page 19, line 19 respectively. Appropriate correction is required.

Figure 3 is objected to as failing to comply with 37 CFR 1.84(p)(5) because it includes the reference sign: 322 not mentioned in the description. Appropriate correction is required.

4.1 Figure 4 is objected to as failing to comply with 37 CFR 1.84(p)(5) because it does not include reference numbers (400) in the description on p. 22, line 12. Appropriate correction is required.

Figure 4 is also objected to as failing to comply with 37 CFR 1.84(p)(5) because it includes the reference sign: 446 not mentioned in the description. Appropriate correction is required.

Applicant is required to carefully review the application to correct such errors.

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an

Art Unit: 2136

international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5.1 **Claims 35-39 and 41-43** are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,751,735 to **Schell et al.**

5.2 **As per claim 35, Schell et al** discloses an apparatus for implementing a public key infrastructure in a distributed processing system, the apparatus comprising: a plurality of modules communicatively coupled to one another and responsive to events generated that meet the recitation of a plurality of beans, the beans communicatively coupled to one another and responsive to events generated by the plurality of beans, for example (see column 9, lines 9-30 and figures 5-6); and discloses a root certifier, a CMC signature root, and other entities and further discloses a CMC signature root that propagates events to another of the plurality of the modules that meets the recitation of at least one of the plurality of beans comprising a pipe bean that propagates an event to another of the plurality of beans, for example (see column 19, lines 1-10 and lines 50-67).

**As per claim 36, Schell et al** discloses a key generation module as an end module that meets the recitation of the at least one bean comprising a sink bean, the sink bean responsive to propagated events and consuming such propagated events, for example (see column 23, lines 60-65).

**As per claim 37, Schell et al** discloses the limitation of wherein the pipe bean passes the event to another bean unaltered, for example (see column 26, lines 13-30). **Schell et al** discloses some modules that provide no cryptographic modification that meets the recitation of wherein the pipe bean passes the event to the another bean unaltered.

**As per claim 38, Schell et al** discloses the limitation of the at least one bean comprising a bean that alters the request, for example (see column 19, lines 51-67). **Schell et al** also discloses one of the pluralities of modules verifying the certificate using a public key. In another embodiment, **Schell et al** discloses a server key generated by the key generation module used for wrapping secret keys used for signing certificates, before being passed to another module (column 23, line 49 through column 24, line 5).

**As per claim 39, Schell et al** discloses the limitation of further comprising a server bean, the server bean responsive to requests from the distributed processing system (column 11, line 59 through column 12, line 7 and column 14, line 54 through column 15, line 12).

**As per claim 41, Schell et al** discloses the limitation of further comprising a generation bean, the generation bean generating a digital certificate in response to an event, for example (see column 16, lines 45-56).

**As per claim 42, Schell et al** discloses the limitation of the at least one bean comprising a bean that publishes information regarding the request, for example (see column 24, lines 8-16).

**As per claim 43, Schell et al** discloses the limitation of further comprising a filter bean, the filter bean filtering events based upon a predetermined criteria, for example (see column 27, lines 15-20).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2136

6.1 **Claims 1, 3-4, 6-9, 12-13, 15-16, 18-20, 23-24, 26-27, 29-31, 34, 40, 44-50** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,751,735 to **Schell et al** in view of Non-Patent Literature to **Balfanz et al**, "A Security Infrastructure for Distributed Java Applications"; Security and Privacy, 2000; S&P 2000 Proceedings; 2000 IEEE Symposium on 14-17 May 2000; Pages: 15-26.

6.2 **As per claims 1, 3, 15, and 26, Schell et al** discloses an apparatus for implementing a request regarding a digital certificate in a distributed processing system, the apparatus comprising: any subsequent entity to CMC signature root (see figure 5) that meets the recitation of a request implementation software that implements a response to the request regarding the digital certificate in response to a propagated event object, for example (see column 19, lines 58-67); at least one CMC signature root that meets the recitation of at least one reception bean, communicatively coupled to the request implementation software and the distributed processing system, that generates an event object in response to receiving the request to generate a digital certificate from the distributed processing system, for example (see column 19, lines 51-57). **Schell et al** discloses plurality of modules to generate even object (see figures 4 and 5). **Schell et al** discloses modules to instantiate in real-time but is silent about object-oriented language. **Balfanz et al** in an analogous art discloses an access control system using JAVA permission classes that meets the recitation of a software instantiated in a real time executable object-oriented language (see abstract). The advantage is that it provides a good distribution system and access control mechanism that requests supply credentials that lead to a proof that a request is valid (page 15). Therefore, it would have been obvious to one of ordinary skill in the art at the



Art Unit: 2136

time the invention was made modify the apparatus of Schell to implement reception software instantiated in a real time executable object-oriented language such as JAVA permission classes and request-response distributing system as taught by **Balfanz et al.** This modification would have been obvious because one skilled in the art would have been motivated by the suggestions provided by **Balfanz et al** so as to provide a good distribution system and access control mechanism that requests supply credentials that lead to a proof that a request is valid (see page 15).

As per claims 13 and 24, **Schell et al** discloses a method for implementing a request regarding a digital certificate in a distributed processing system, the method comprising: receiving the request to generate the digital certificate from the distributed processing system in an at least one CMC signature root that meets the recitation of at least one reception bean, for example (see column 19, lines 51-57); the CMC applies a signature that meets the recitation of generating a reception event object in response to step of receiving, for example (see column 19, lines 51-67); forwarding it to another entity that meets the recitation of propagating the reception event object, for example (see column 19, lines 51-67 and column 19, lines 1-10 and 21-29); in another embodiment **Schell et al** discloses third party software for operating selected cryptographic executable for an application associated with a computer (see claim 13); in another embodiment **Schell et al** discloses policy engine that can be linked with CMC to implement any type of filter using rules, attributes, and executables such as key generation, key usage, escrow of keys, etc. (see column 29, lines 20-61) that meets the recitation of selectively implementing a response to the request regarding the digital certificate in response to a propagated event object

in a request implementation software. **Schell et al** modules to instantiate in real-time but is silent about object-oriented language. **Balfanz et al** in an analogous art discloses a security infrastructure for an access control system with PKI using JAVA permission classes that meets the recitation of a software instantiated in a real time executable object-oriented language (see abstract). The advantage is that it provides a good distribution system and access control mechanism that requests supply credentials that lead to a proof that a request is valid (page 15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made modify the apparatus of Schell to implement reception software instantiated in a real time executable object-oriented language such as JAVA permission classes and request-response distributing system as taught by **Balfanz et al**. This modification would have been obvious because one skilled in the art would have been motivated by the suggestions provided by **Balfanz et al** so as to provide a good distribution system and access control mechanism that requests supply credentials that lead to a proof that a request is valid (see page 15).

**As per claim 44, Schell et al** discloses an apparatus for implementing a public key infrastructure in a distributed processing system, the apparatus comprising: a plurality of modules communicatively coupled to one another and responsive to events generated that meet the recitation of a plurality of beans, the beans communicatively coupled to one another and responsive to events generated by the plurality of beans, for example (see column 9, lines 9-30 and figures 5-6); **Schell et al** discloses for instance executables within a policy engine that may be used to perform several functions that meets the recitation of respective events generated by the plurality of beans subclassing from a base class event, for example (see column 26, lines 1-

Art Unit: 2136

12). Java language is well known in the art as a platform that includes groups of classes and subclasses can be generated from base class event. **Balfanz et al** in an analogous art discloses a security infrastructure for an access control system with PKI using JAVA permission classes as mentioned in claim 1. Therefore, claim 44 is rejected on the same rationale as the rejection of claim 1.

**As per claims 4, 16, 27, Schell et al** discloses a CMC signature root that meets the recitation of at least one bean comprising a pipe bean, for example (see column 19, lines 1-10 and lines 58-67).

**As per claims 6, 18, and 29, Schell et al** discloses the limitation of the at least one bean comprising a bean that alters the request, for example (see column 19, lines 51-67). **Schell et al** also discloses one of the pluralities of modules verifying the certificate using a public key. In another embodiment, **Schell et al** discloses a server key generated by the key generation module used for wrapping secret keys used for signing certificates, before being passed to another module (column 23, line 49 through column 24, line 5).

**As per claims 7, 19, and 30, Schell et al** discloses the limitation of the at least one bean comprising a bean that publishes information regarding the request, for example (see column 24, lines 8-16).

**As per claim 8, Schell et al** discloses a CMC signature root that meets the recitation of at least one bean comprising a pipe bean, for example (see column 19, lines 1-10 and lines 58-67) and also discloses an end module (152d or 152e) (see column 19, lines 22-23) that meets the recitation of sink bean, for example (see figure 5).

**As per claims 9, 20, and 31, Schell et al** discloses a key generation module as an end module that meets the recitation of the at least one bean comprising a sink bean, the sink bean responsive to propagated events and consuming such propagated events, for example (see column 23, lines 60-65).

**As per claims 12, 23, and 34, Schell et al** discloses the limitation of the certificate generation software comprising legacy software, for example (see column 28, lines 49-57).

**As per claims 45-46**, the combination of **Schell et al** and **Balfanz et al** discloses the limitation of wherein the beans and events are written in a cross platform language, the cross platform language is JAVA, for example (see **Balfanz et al**, abstract). Therefore, they are rejected on the same rationale as the rejection of claim 44 above.

**As per claim 47, Schell et al** discloses the limitation of the at least one bean comprising a bean that publishes information regarding the request, for example (see column 24, lines 8-16).

**As per claim 48, Schell et al** discloses the limitation of further comprising a generation bean, the generation bean generating a digital certificate in response to an event, for example (see column 16, lines 45-56).

**As per claim 49, Schell et al** discloses the limitation of further comprising a server bean, the server bean responsive to requests from the distributed processing system (column 11, line 59 through column 12, line 7 and column 14, line 54 through column 15, line 12).

**As per claims 40 and 50, Schell et al** discloses the limitation of further comprising a client bean, the client bean responsive to events from the other beans and generating requests to the distributed processing system, for example (see **Balfanz et al**, pages 24-25, section 6).

7. **Claims 2, 5, 10, 11, 14, 17, 21, 22, 25, 28, 32, and 33** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,751,735 to **Schell et al** in view of Non-Patent Literature to **Balfanz et al**, "A Security Infrastructure for Distributed Java Applications"; Security and Privacy, 2000; S&P 2000 Proceedings; 2000 IEEE Symposium on 14-17 May 2000; Pages: 15-26 as applied to claims 1, 13, and 24 and further in view of US Patent Publication US 2001/0001877 to **French et al**.

7.1 **As per claims 2, 14, and 25, Schell et al** discloses plurality of modules and discloses different attributes and functionalities associated with each module (column 26, lines 6-67; see also column 27, line 26 through column 28, line 2). **Schell et al** also discloses that formats may

Art Unit: 2136

be governed by policy. **Schell et al** does not explicitly disclose that the events are generated in response to requests of different formats. **French et al** in an analogous art discloses a network authentication system that provides verification of identity and other attributes of a network user to conduct a transaction; a preprocessing stage is employed to ensure correct formatting of the input information. **French et al** discloses generating an event in response to requests of different formats (see page 4, paragraphs 71-75). **French et al** further discloses that one of the advantages of the preprocessing is the ability to process as much requested data as possible from separate data sources and to reduce false negatives due to inconsistencies of mismatched information applied against known data sources (see page 4, paragraphs 72-73). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made modify the method and apparatus as combined above to have each of the plurality of the modules disclosed in **Schell** to generate an event in response to requests of differing formats as taught by **French et al**. This modification would have been obvious because one skilled in the art would have been motivated by the suggestions provided by **French et al** so as to provide a consistent data formatting between the information supplied by the user and what is expected from the data sources and the ability to process as much requested data as possible from separate data sources and to reduce false negatives due to inconsistencies of mismatched information applied against known data sources (see page 4, paragraphs 72-73).

As per claims 5, 17, and 28, the combination of **Schell et al**, **Balfanz et al**, and **French et al** discloses the limitation of the at least one bean comprising a bean implementing a test on

the request, for example (see **French et al**, page 4, paragraphs 076-077). Therefore, they are rejected on the same rationale as the rejection of claims 2, 14, and 25 above.

**As per claims 10, 21, and 32**, the combination of **Schell et al**, **Balfanz et al**, and **French et al** discloses the limitation of the at least one bean comprising a client bean that propagates a request in a first format, for example (see **French et al**, pages 4, paragraphs 071-073). Therefore, they are rejected on the same rationale as the rejection of claims 2, 14, and 25 above.

**As per claims 11, 22, and 33**, the combination of **Schell et al**, **Balfanz et al**, and **French et al** discloses the limitation of the at least one bean comprising another client bean that propagates a request in a second format another client bean that propagates a request in a second format, for example (see **French et al**, pages 4, paragraphs 071-073). Therefore, they are rejected on the same rationale as the rejection of claims 2, 14, and 25 above.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 2136


the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8.1 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carl Colin whose telephone number is 571-272-3862. The examiner can normally be reached on Monday through Thursday, 8:00-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Co  
Carl Colin  
Patent Examiner  
April 11, 2005

  
AYAZ SHEIKH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100